

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Thomas Lloyd Hiller
David Albert Rossetti

Serial No.: 10/799,569

Filed: March 12, 2004

For: METHOD AND APPARATUS FOR
PROVIDING A LOW-LATENCY, HIGH-
ACCURACY INDICATION-TO-SPEAK

Confirmation No. 6464

Examiner: J. Young

Group Art Unit: 2618

Att'y Docket: 2100.005300

Customer No. 46290

APPEAL BRIEF

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant hereby submits this Appeal Brief to the Board of Patent Appeals and Interferences in response to the Final Office Action dated January 15, 2010. A Notice of Appeal and a Pre-Appeal Brief Request for Review were filed on February 12, 2010.

**The Director is authorized to deduct the fee for filing this Appeal Brief (\$540) from
Williams, Morgan & Amerson, P.C. Deposit Account No. 50-0786/2100.005300.**

I. REAL PARTY IN INTEREST

The present application is owned by Lucent Technologies, Inc. The assignment of the present application to LUCENT TECHNOLOGIES, INC., is recorded at Reel 015482, Frame 0158.

II. RELATED APPEALS AND INTERFERENCES

Applicant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.

III. STATUS OF THE CLAIMS

Claims 1-13 are pending in the application and are the subject of the present appeal. Claims 1-13 stand rejected under 35 U.S.C. § 102(b) for allegedly being anticipated by Rosen (WO 02/093953).

IV. STATUS OF AMENDMENTS

There were no amendments after the final rejections.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 sets forth a method of communication with a dormant mobile station (104, 106). The method includes:

- paging the dormant mobile station (104, 106) in response to receiving a request from a first mobile station (104, 106) to transmit a message to the dormant mobile station (104, 106). See Patent application, page 21, lines 17-24 and Figures 1-2.

- receiving a page response signal from the dormant mobile station (104, 106). See Patent Application, page 22, lines 1-2 and Figure 2.
- providing an indication-to-speak to the first mobile station (104, 106) in response to receiving a page-event indication from a mobility data network (118, 120). The page-event indication is formed by the mobility data network (118, 120) based on the page response signal. See Patent Application, page 22, line 22-page 23, line 2 and Figure 2.
- establishing a connection with the dormant mobile station (104, 106) in response to receiving the page response signal. The indication-to-speak is provided to the first mobile station (104, 106) concurrently with establishing the connection. See Patent Application, page 21, line 23-page 23, line 5.

Claim 6 sets forth a method of communicating with a mobile station (104, 106) that includes:

- delivering a request to transmit a message to the mobile station(104, 106) via a mobility data network (118, 120).
- receiving a page-event indication-to-speak from the mobility data network (118, 120). The page-event indication being formed by the mobility data network (118, 120) based on a page response signal received from the mobile station (104, 106).

Claim 9 sets forth an apparatus for communication between a first and a second mobile station (104, 106). The apparatus includes a network adapted to:

- page the second mobile station (104, 106) in response to receiving a request from the first mobile station (104, 106) to transmit a message to the second mobile station (104, 106). See Patent application, page 21, lines 17-24 and Figures 1-2.
- receive a page response signal from the second mobile station (104, 106). See Patent Application, page 22, lines 1-2 and Figure 2.
- provide an indication-to-speak to the first mobile station (104, 106) in response to receiving a page-event indication from a mobility data network (118, 120). The page-event indication is formed by the mobility data network (118, 120) based on the page response. . See Patent Application, page 22, line 22-page 23, line 2 and Figure 2.
- establish a connection with the second mobile station (104, 106) in response to receiving the page response signal. The indication-to-speak is provided to the first mobile station (104, 106) concurrently with establishing the connection. See Patent Application, page 21, line 23-page 23, line 5.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant respectfully requests that the Board review and overturn the rejections present in this case. The following issues are presented on appeal in this case:

- (A) Whether claims 1-5 are anticipated by Rosen.
- (B) Whether claims 6-8 are anticipated by Rosen.
- (C) Whether claims 9-13 are anticipated by Rosen.

VII. ARGUMENT

A. Legal Standards

An anticipating reference by definition must disclose every limitation of the rejected claim in the same relationship to one another as set forth in the claim. *In re Bond*, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990).

B. Claims 1-5 Are Not Anticipated by Rosen.

Push-to-talk-over-cellular (PoC) wireless communication systems provide a one-to-many transmission mode that is similar to the communication modes used by conventional police or fire radio systems. These systems use an indication-to-speak signal to indicate to a calling mobile station that it may begin generating media (such as a voice signal) for eventual transmission to one or more called parties. Significant delays or latency between a request to speak and receiving the indication-to-speak to a calling user is a problematic issue in PoC systems. There is also a countervailing need to provide accurate indications for the user to speak. See Patent Application, page 3, lines 4-22.

Conventional wireless networks can provide an unconfirmed indication-to-speak. The indication-to-speak is “unconfirmed” because it is transmitted before signaling the called mobile units to verify that they can accept the incoming PoC call. The user begins speaking when the indication-to-speak is received and the speaker’s voice packets are buffered. After sending the unconfirmed indication-to-speak, the wireless network pages the called mobile stations and releases the buffered speech to the called mobile station after the mobile station responds to the page and sets up an over-the-air connection. Although the unconfirmed indication-to-speak

approach may reduce latency, the accuracy of the technique is limited. See Patent Application, page 5, line 12.

For users that require a highly accurate indication-to-speak, there is another solution practiced in the art of PoC called the confirmed indication-to-speak. In the confirmed indication-to-speak, the wireless network does not provide an indication-to-speak until the mobile station successfully receives and responds by sending PoC signaling, thereby accepting the incoming PoC call. In this case, the mobile station is inherently reachable by radio and ready to receive speech packets from the requesting user. Thus, there is no need for the wireless network to buffer the speaker's media. Unfortunately, as outlined above, the calling user now suffers a greater latency of the indication-to-speak. Therefore, the accuracy of the confirmed indication-to-speak is improved at the expense of latency of indication-to-speak, which increases undesirably from the point of view of the calling user. See Patent Application, page 5, line 14-23.

The present application describes an alternative approach that is referred to herein as the page-event indication-to-speak that has latency comparable to the unconfirmed indication-to-speak and accuracy comparable to a confirmed indication-to-speak. See Patent Application, page 7, line 24-page 8, line 6. The pending claims set forth embodiments of the page-event indication-to-speak that may include, among other things, the following steps:

- providing an indication-to-speak to a first mobile station in response to receiving a page-event indication from a mobility data network. The page-event indication is formed by the mobility data network based on a page response signal received from a dormant mobile station.

- establishing a connection with the dormant mobile station in response to receiving the page response signal. The indication-to-speak is provided to the first mobile station concurrently with establishing the connection.

The claimed embodiments therefore use the page response received at the mobility data network to initiate both the transmission of the indication-to-speak to the calling party and the concurrent establishment of a connection to the called party. The claimed page-event indication-to-speak approach is therefore distinguished from the conventional unconfirmed indication-to-speak technique by two features. First, the page-event indication-to-speak is not provided until the mobility data network receives a page response from the called party. Receiving the page response indicates a high probability that the dormant mobile station will be available to receive communication from the first mobile station. Second, the claimed page-event indication-to-speak is provided concurrently with establishing the connection to the dormant mobile station. The claimed page-event indication-to-speak is therefore provided before the mobile station establishes a traffic channel and consequently before the mobile station responds by sending PoC signaling over the traffic channel to accept the incoming PoC call.

Rosen describes waking up dormant mobile units in a group of idle mobile units and re-establishing dedicated traffic channels using short data burst message signaling. See Rosen, paragraphs [0108-0119]. Applicants respectfully submit that the Examiner has erred in concluding that Rosen anticipates the subject matter set forth in claim 1. To the contrary, Applicants respectfully submit that Rosen describes an unconfirmed indication-to-speak technique for at least the following reasons.

In step 2 of the Rosen technique, a talker's mobile transmits a floor-request message in response to a user pressing push-to-talk. The talker's mobile may begin buffering user media

from this point forward. See Rosen, paragraph [0110]. Applicants therefore respectfully submit that the user has been given an implicit or explicit indication-to-speak at this point because the talker's mobile may begin buffering user media and therefore the user is "speaking" to generate the buffered data. This indication has been provided to the user in response to a user pressing push-to-talk and prior to receiving any response from the dormant mobile units in the group. In fact, the indication-to-speak is provided to the user before the talker's mobile unit even attempts to reestablish its own traffic channel by sending an origination message in step 3. See Rosen, paragraph [0111]. Applicants therefore respectfully submit that Rosen does not describe or suggest providing an indication-to-speak to a first mobile station in response to receiving a page-event indication formed by a mobility data network based on a page response signal received from a dormant mobile station, as set forth in claim 1.

In step 7, each listener mobile responds to the page that was generated by the infrastructure in step 5. This begins the process of re-establishing each listener's traffic channel. See Rosen, paragraph [0115]. Rosen therefore teaches that the process of re-establishing the listener traffic channels begins several steps after an indication-to-speak has been provided to the talker and after the talker has begun "speaking" and buffering this information for eventual transmission to the listeners. Applicants therefore respectfully submit that Rosen does not describe or suggest providing an indication-to-speak to a first mobile station concurrently with establishing a connection with the dormant mobile station, as set forth in the pending claims.

For at least the aforementioned reasons, Applicants respectfully submit that the Examiner has erred in concluding that the pending claims are anticipated by Rosen because Rosen does not disclose every limitation of the rejected claim in the same relationship to one another as set forth

in the claim. Applicants therefore respectfully request that the Examiner's rejections of claims 1-5 under 35 U.S.C. § 102(b) be REVERSED.

C. Claims 6-8 Are Not Anticipated by Rosen.

Claim 6 sets forth, among other things, delivering a request to transmit a message to the mobile station via a mobility data network and receiving a page-event indication-to-speak from the mobility data network. The page-event indication set forth in claim 6 is formed by the mobility data network based on a page response signal received from the mobile station.

Applicants respectfully submit that the Examiner has erred in concluding that Rosen anticipates the subject matter set forth in claim 6 for at least the following reasons.

In step 2 of the Rosen technique, a talker's mobile transmits a floor-request message in response to a user pressing push-to-talk. The talker's mobile may begin buffering user media from this point forward. See Rosen, paragraph [0110]. Applicants therefore respectfully submit that the user has been given an implicit or explicit indication-to-speak at this point because the talker's mobile may begin buffering user media generated by the "speaking" user. This indication has been provided to the user in response to a user pressing push-to-talk and prior to receiving any response from the dormant mobile units in the group. In fact, the indication-to-speak is provided to the user before the talker's mobile unit even attempts to reestablish its own traffic channel by sending an origination message in step 3. See Rosen, paragraph [0111]. Applicants therefore respectfully submit that Rosen does not describe or suggest receiving (e.g., at a mobile unit from the mobility data network) a page-event indication-to-speak that is formed based on a page response signal received from a dormant mobile station, as set forth in claim 6.

For at least the aforementioned reasons, Applicants respectfully submit that the Examiner has erred in concluding that the pending claims are anticipated by Rosen because Rosen does not disclose every limitation of the rejected claim in the same relationship to one another as set forth in the claim. Applicants therefore respectfully request that the Examiner's rejections of claims 6-8 under 35 U.S.C. § 102(b) be REVERSED.

D. Claims 9-13 Are Not Anticipated by Rosen.

Claim 9 sets forth, among other things, an apparatus for communication between a first and a second mobile station. The apparatus includes a network that is configured to page the second mobile station in response to receiving a request from the first mobile station to transmit a message to the second mobile station. The network may also receive a page response signal from the second mobile station and provide an indication-to-speak to the first mobile station in response to receiving a page-event indication from a mobility data network. The page-event indication is formed by the mobility data network based on the page response. The network may further establish a connection with the second mobile station in response to receiving the page response signal. The indication-to-speak is provided to the first mobile station concurrently with establishing the connection.

Rosen describes a communication manager (CM 110) that can wake up dormant mobile units in a group of idle mobile units and control re-establishment dedicated traffic channels using short data burst message signaling. See Rosen, paragraphs [0108-0119]. Applicants respectfully submit that the Examiner has erred in concluding that the CM described by Rosen anticipates the apparatus set forth in claim 9. To the contrary, Applicants respectfully submit that Rosen

describes a device that operates in the conventional manner by providing an unconfirmed indication-to-speak technique for at least the following reasons.

In step 2 of the Rosen technique, a talker's mobile transmits a floor-request message to the CM in response to a user pressing push-to-talk. The talker's mobile may begin buffering user media from this point forward. See Rosen, paragraph [0110]. Applicants therefore respectfully submit that the user is "speaking," and has been given an implicit or explicit indication-to-speak by the CM, at this point because the talker's mobile may begin buffering user media generated by the speaking user. The CM has provided this indication to the user in response to a user pressing push-to-talk and prior to receiving any response from the dormant mobile units in the group. In fact, the CM has provided this indication-to-speak to the user before the talker's mobile unit even attempts to reestablish its own traffic channel by sending an origination message to the network infrastructure in step 3. See Rosen, paragraph [0111]. Applicants therefore respectfully submit that the CM and/or infrastructure described by Rosen does not describe or suggest an apparatus and/or a network that can provide an indication-to-speak to a first mobile station in response to receiving a page-event indication formed by a mobility data network based on a page response signal received from a dormant mobile station, as set forth in claim 9.

In step 7, each listener mobile responds to the page that was generated by the infrastructure in step 5. This begins the process of re-establishing each listener's traffic channel. See Rosen, paragraph [0115]. Rosen therefore teaches that the process of re-establishing the listener traffic channels begins several steps after an indication-to-speak has been provided to the talker and after the talker has begun "speaking" and buffering this information for eventual transmission to the listeners. Applicants therefore respectfully submit that the CM and/or

network infrastructure described in Rosen does not provide an indication-to-speak to a first mobile station concurrently with establishing a connection with the dormant mobile station, as set forth in the pending claims.

For at least the aforementioned reasons, Applicants respectfully submit that the Examiner has erred in concluding that the pending claims are anticipated by Rosen because Rosen does not disclose every limitation of the rejected claim in the same relationship to one another as set forth in the claim. Applicants therefore respectfully request that the Examiner's rejections of claims 9-13 under 35 U.S.C. § 102(b) be REVERSED.

VIII. CLAIMS APPENDIX

The claims that are the subject of the present appeal – claims 1-13 – are set forth in the attached “Claims Appendix.”

IX. EVIDENCE APPENDIX

There is no separate Evidence Appendix for this appeal.

X. RELATED PROCEEDINGS APPENDIX

There is no Related Proceedings Appendix for this appeal.

XI. CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner erred in not allowing all claims pending in the present application, claims 1-13 over the prior art of record.

The undersigned may be contacted at (713) 934-4052 with respect to any questions, comments or suggestions relating to this appeal.

Respectfully submitted,

Date: July 8, 2010

/Mark W. Sincell/
Mark W. Sincell, Ph.D.
Reg. No. 52,226
WILLIAMS, MORGAN & AMERSON
10333 Richmond, Suite 1100
Houston, Texas 77042
(713) 934-7000
(713) 934-7011 (facsimile)

AGENT FOR APPLICANTS

Serial No. 10/799,569
Appeal Brief

CLAIMS APPENDIX

1. (Previously Presented) A method of communication with a dormant mobile station, the method comprising:

paging the dormant mobile station in response to receiving a request from a first mobile station to transmit a message to the dormant mobile station;

receiving a page response signal from the dormant mobile station; and

providing an indication-to-speak to the first mobile station in response to receiving a page-event indication from a mobility data network, the page-event indication being formed by the mobility data network based on the page response signal; and

establishing a connection with the dormant mobile station in response to receiving the page response signal, the indication-to-speak being provided to the first mobile station concurrently with establishing the connection.
2. (Original) A method, as set forth in claim 1, wherein paging the dormant mobile station in response to receiving the request from the first mobile station to transmit a message to the dormant mobile station further comprises paging the dormant mobile station in response to receiving a request from the first mobile station to transmit a PoC message to the dormant mobile station.
3. (Previously Presented) A method, as set forth in claim 1, wherein establishing the connection with the dormant mobile station comprises establishing at least one traffic channel to the dormant mobile station, and further comprising:

delivering the message over the connection.

4. (Original) A method, as set forth in claim 3, wherein establishing the connection with the dormant mobile station in response to receiving the page response signal further comprises establishing a plurality of connections with the dormant mobile station in response to receiving the page response signal.
5. (Original) A method, as set forth in claim 1, wherein paging the dormant mobile station in response to receiving the request from the first mobile station to transmit the message to the dormant mobile station further comprises paging the dormant mobile station in response to receiving a request-to-speak from the first mobile station to transmit a voice message to the dormant mobile station.
6. (Previously Presented) A method of communicating with a mobile station comprising:
delivering a request to transmit a message to the mobile station via a mobility data network; and
receiving a page-event indication-to-speak from the mobility data network, the page-event indication being formed by the mobility data network based on a page response signal received from the mobile station.
7. (Previously Presented) A method, as set forth in claim 6, wherein delivering the request to transmit the message to the mobile station further comprises delivering a request to transmit a PoC message to a mobile station.

8. (Original) A method, as set forth in claim 6, wherein delivering the request to transmit the message to the mobile station further comprises delivering a request-to-speak to a mobile station.
9. (Previously Presented) An apparatus for communication between a first and a second mobile station, the apparatus comprising a network adapted to:
 - page the second mobile station in response to receiving a request from the first mobile station to transmit a message to the second mobile station;
 - receive a page response signal from the second mobile station;
 - provide an indication-to-speak to the first mobile station in response to receiving a page-event indication from a mobility data network, the page-event indication being formed by the mobility data network based on the page response; and
 - establish a connection with the second mobile station in response to receiving the page response signal, the indication-to-speak being provided to the first mobile station concurrently with establishing the connection.
10. (Previously Presented) An apparatus, as set forth in claim 9, wherein the network is further adapted to page the second mobile station in response to receiving a request from the first mobile station to transmit a PoC message to the second mobile station.

11. (Previously Presented) An apparatus, as set forth in claim 10, wherein the network is further adapted to:
 - establish a connection with the second mobile station in response to receiving the page response signal, the indication-to-speak being provided to the first mobile station concurrently with establishing the connection; and
 - deliver the message over the connection.
12. (Original) An apparatus, as set forth in claim 11, wherein the network is further adapted to establish a plurality of connections with the second mobile station in response to receiving the page response signal.
13. (Original) An apparatus, as set forth in claim 10, the network is further adapted to page the second mobile station in response to receiving a request-to-speak from the first mobile station to transmit a voice message to the second mobile station.